ActSafe PME

4-stroke engine

User's guide

WARNING!
All potential users of this equipment and users management must be read and understand the instructions fully.
Failure to do so could result in serious injury or death.

ActSafe®
actsafe-ascenders.com

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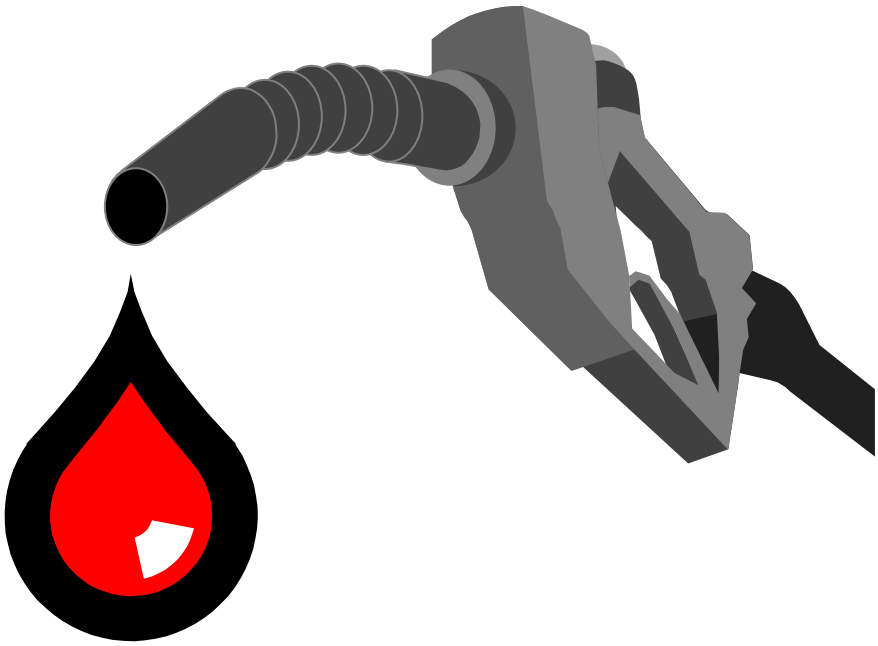
NOTE!



Fuel

>95 octane
4-stroke engine

Thank you for choosing a product from **Act Safe Systems AB**®. This machine, correctly used, will provide you with the ability to perform your work at height both safely and efficiently. Less effort is required on your behalf to reach your work position and equally to bring up any necessary materials and tools.

Please closely follow the instructions as shown in the description of the machine and the work method described, and ActSafe PME will open up new possibilities for working safely at height

ActSafe offers you a full range of personal protective equipment (PPE), and comprehensive training in the use and handling of this equipment. Please visit **www.actsafe.se** for more information on your local stockist

CONTENTS

Fuel – warning	Page 2
Symbols	Page 4
Definitions	Page 5
Safety precautions	Page 6
User manual for ActSafe PME	Page 7
How to use the machine	Page 8
Fuel- and maintenance safety	Page 9
Transport and storage	Page 10
Stopping-, running in, Working methods, summary	Page 11-12
Working Technique, description of machine operation	Page 13-15
Operation in case of an engine failure	Page 16-18
Examples of rescue measures	Page 19
Rescue of colleagues in emergency situations	Page 20
Example of setup	Page 21
Service and inspection	Page 22-23
Rope Grab	Page 24
Engine warranty	Page 25
Extended warranty	Page 26
Guarantee	Page 27
Warning, User's Caution	Page 28
Declaration of conformity	Page 29
EC Certification	Page 30
Service card	Page 31
Specification of ActSafe PME	Page 32

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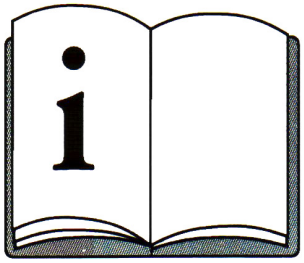
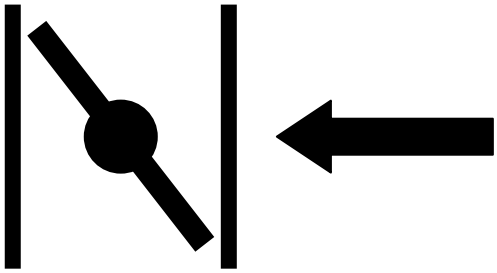


The motor must not be operated before these safety instructions have been read and understood. Read this guide carefully as well as the instructions concerning the engine (page 21).

This symbol means that the text refers to risk of injury. The words *Danger*, *Attention* and *Caution* indicate the degree of risk. Not following the directions may result in death, injuries and/or damage to property.

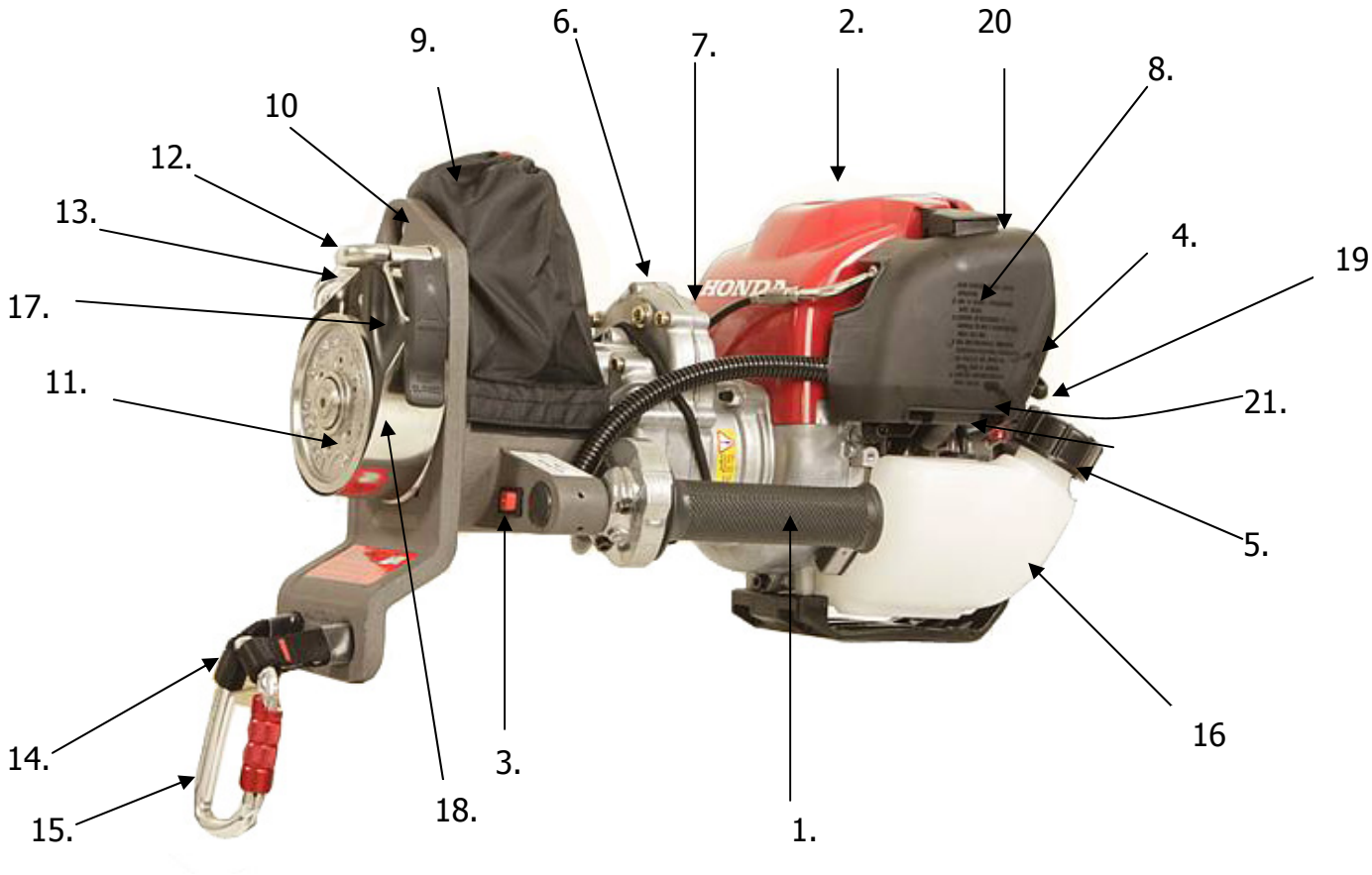
Always wear head and ear protectors when using this unit.

Shows the direction of the rotation of the rope grab.



Explains choke position. The sign indicates choke closed.

Definitions



1. Accelerator Handle	**12. Top hole for fastening the rope/carabiner**
2. Spark Plug	**13. Lower hole, NOT FOR LIFTING!**
3. Switch	**14. Engine Sling**
4. Starter Assy Red/Magnapull	**15. Carabiner D-form**
5. Tank Lid complete	**16. Fuel Tank**
6. Gear box/Transmission	**17. Knife**
7. I'D, descending device	**18. Cover**
8. Air Filter	**19. Start lever**
9. Rescue Kit	**20. Idle Screw**
10. Loop with long washer	**21. Fuel pump**
11. Rope Grab	

SAFETY PRECAUTIONS

If this warning is ignored, it could result in death, serious injuries or damage to property.

DO NOT run the engine in an unventilated area. (Exhaust gases contain carbon monoxide, an odourless deadly toxin).
DO NOT put your hands or feet into moving or rotating parts.
DO NOT store, spill or use petrol near any ignition source, including unshielded flames or near furnaces or water heaters that have permanent flames or which could produce sparks.
DO NOT refuel the device inside buildings or non ventilated areas.
DO NOT remove the cover of the fuel tank or fill the fuel tank when the engine is still hot or running. (The engine should cool for at least 2 minutes before refuelling).
DO NOT run the engine if petrol has been spilled or it smells of petrol or if there is any other danger of explosion. (Shift the device away from petrol and avoid sparks until volatilised).
DO NOT transport the engine if there is fuel in the tank or the fuel shut-off valve is open.
DO NOT modify the parts to increase the revolution speed. (Always run the engine at speed set by the producer of the device).
DO NOT use a removed spark plug to determine whether it is sparking.
DO NOT start the engine if the spark plug has been removed. (If the engine is over oiled, bring the throttle to "full throttle" (quick) and start up the engine).
DO NOT run the engine without sound absorber. Check the sound absorber on a regular basis and replace if necessary.
DO NOT run the engine if there is an accumulation of grass, leaves or other flammable material under, on or behind the sound absorber.
DO NOT touch the sound absorber, the cylinder or the radiator when they are hot – it could cause burns.
DO NOT start up the engine if the air filter or air filter cover have been removed.
TO AVOID ACCIDENTIAL START UP during maintenance works of the engine or the device remove the ignition cable.
Keep the cylinder fins and control parts free from dirt and other foreign substances, which could affect the revolution speed.

Starting

Slowly pull the starter until you feel resistance. Then pull the starter strongly in order to avoid backstroke and injuries to hand or arm.

USE FRESH PETROL. **>95 octane lead-free**

Use the original spare parts/materials of Act Safe Systems only. Warranty will be void if any other spare parts are used.

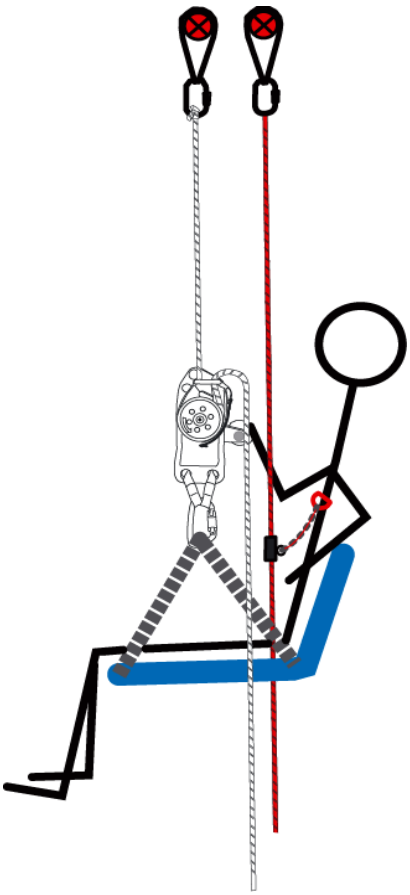
USER'S MANUAL
ActSafe PME

This user's manual will not replace instruction and training. The product should only be used by personnel who have received training and practice in both the ActSafe PME and handling components designed to be used as Personal Protective Equipment.

GENERAL INFORMATION

This machine is designed to be used with kernmantle ropes measuring 10-12 mm Ø, standard approved according to EN1891. Please, only use ropes that had been approved by Act Safe Systems AB as suitable to be used together with the machine (see specifications on page 24). Similar ropes may be too soft and will easily be damaged.

A secondary safety line according to EN 353-2 has to be used together with the working method which is covered by the European Temporary Work Directive Amendment. The equipment fulfils the EG-directive 98/37/EG (Machine). A sit-harness EN 813 or a full-body harness EN 361 with a central attachment point on the front at waist height will be used. The harness should be so designed as to provide the user with a comfortable sitting position during the ascent. The machine's motor shall be maintained and used as specified in the instructions of the machine unit.



BEFORE USE

Before the ActSafe PME is used, all components should be checked and inspected The user should make sure that the machine is in good working order, that it will be used together with components designed for the purpose, i. e. components designed for use in personal fall arrest equipment, and that the components will also fulfil the requirements that are specified in this user manual.

INSPECTION REQUIREMENTS

Check that all parts on the machine are in full working order. If there is any doubt whatsoever, the machine should be handed in to a person who is competent to judge and, if necessary, replace the parts to make it usable again, or to discard the machine or those parts of the machine that will reduce the machine's protective function. Contact your Act Safe-retailer or a person qualified to *ActSafe PME-INSTRUCTOR* standard. They will have the necessary qualifications to carry out this type of service.

The machine should always be checked before use, and should undergo at least one annual service by the manufacturer, local agent or personnel educated to *ActSafe PME-INSTRUCTOR* level The machine has a built-in overload protection, which means that the machine cannot be used if the load, hanging from the machine, is too heavy. If the machine has clearly sustained damage, which could result in a risk of overload, the machine should be taken out of service, and should be checked by a person with the necessary competence before being used again.

Make sure that the equipment on the ActSafe PME is complete before use, particularly the equipment in the rescue kit on the unit. The contents of the rescue kit are meant only to be used in case of engine failure at height.

The ActSafe PME should be stored in a dry and clean place when not in use. Clean and dry the machine with a cloth after use, removing all moisture and dirt, check the rope grab, attachments, and machine components for damage. The rope grab and parts where the rope and slings come into contact with the machine should be closely checked. Look for sharp edges that can damage the textile fabrics.

Check carefully the sling under the rope grab, and replace it if there is any reason to doubt its integrity. During the inspection, check for damage on the sling which may have been caused by wear or by sharp objects. If any damage is sustained where several fibres are broken in the same place, the sling must be replaced. A visual inspection of the machine should be carried out before each use.

Check the locking function of the karabiners and look for sharp edges that may damage the straps of the harness, or the sling that forms the attachment system to the machine. In the same way, check the components that form the "rescue kit" which are packed in the pouch on top of the ActSafe PME. If the slings have become wet during use, they should be hung to dry at room temperature.

Before the machine is used, the user should also make sure that the anchor point for the work rope, which the machine is connected to, has a braking load of min. 15kN, all other components shall be CE-marked, UL-classified or classified as personal fall arrest equipment.

The ActSafe PME is approved to lift max. 300 kg. If the machine should be overloaded, the overload protection will be released, and the centrifugal clutch will spin (approx. at 350 kg). After an overload, the ActSafe PME should first be allowed to cool down, and the load should be reduced under the limit before testing it again.

Recording Inspections

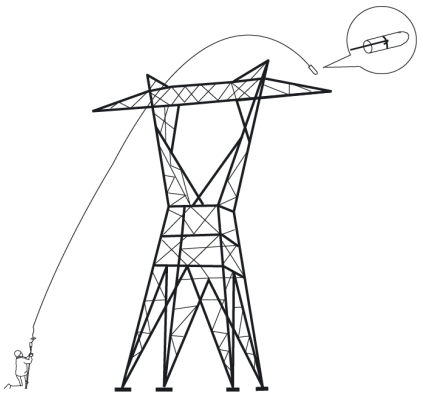
Inspections should be recorded as minimum every 6 months and on the inspection record included in this manual.

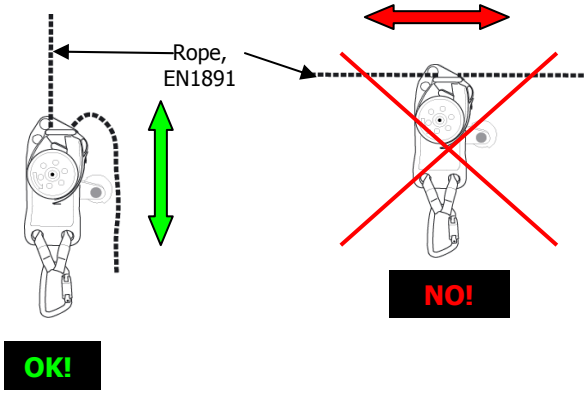
HOW TO USE THE MACHINE
Before the machine is started, check the points mentioned above, make sure that the machine has sufficient petrol, and make sure that if any other type of personal protective equipment is needed, e. g. descending device, it is ready for use. Start the machine as instructed in the user's manual, and make sure that the ActSafe PME is in good working order before ascending.

Your colleague can put some light tail weight on the loose end of the rope to help you travel up more smoothly. Ascend to a position where, if possible, both feet can be placed firmly on some surface. Attach a descender equipped with an auto lock facility on the rope below the ActSafe PME; remove the rope from the ActSafe PME rope grab (the principal attachment point is now via the descender).

If your work takes longer than 15-20 min you should attach an ergonomic support to your harness (for example a comfort seat/sit-board/Bosun's chair).

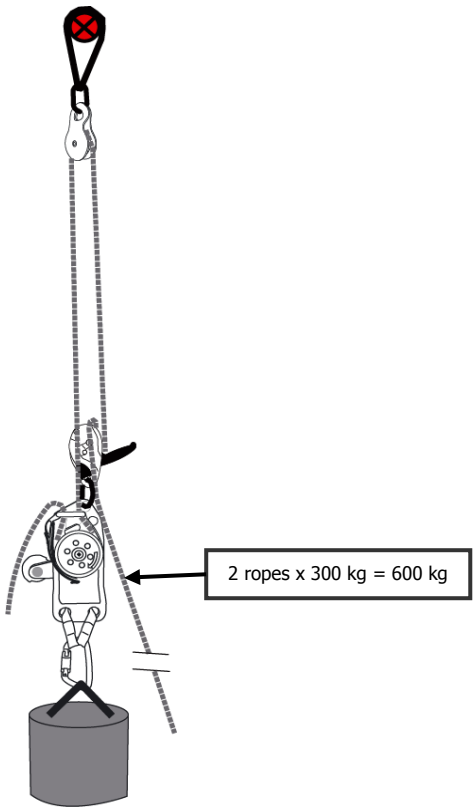
The working rope for the machine can be set up in two different ways, either by "throwing" the rope with the help of a so called "line thrower", or by setting up a thinner pilot-line on the mast/pole to pull the work rope.





If the machine is then not be used to haul up material and tools, it can be now lowered to the ground immediately after the ascent. If the machine is to be used to haul up equipment, it should be attached "upside down" to a suitable and sufficiently strong point of anchorage**.**

USE DURING RESCUE OPERATIONS
ActSafe PME can also be used during rescue operations where rescue personnel operating the machine are transported upwards together with the injured (in emergency situations also with the injured on a stretcher).
During such operations, the working rope should be attached to the machine body so that one end of the rope functions as a deflection. A deflection pulley is installed to the top attachment point. The winch now has increased lifting power but the configuration reduces the speed of the machine during lifting. The machine can now be loaded with **max 600 kg**.



Follow the above instructions and check before use whether the deflection pulley, additional karabiner, loops and anchorage point are stable enough.

Fasten the stretcher and the injured as instructed by the producer of the stretcher. Check if the stretcher is suitable for such operations.

Rescue operations of this type require well-qualified personnel that are familiar with personal fall protection in general and with rescue equipment and its functions in detail. Training is carried out by the producer or by trainers who have passed the training course "ActSafe PME BASIC".

OPERATOR SAFETY
- Secure long hair so it can not be caught in moving parts
- Ensure any loose straps or clothing is also secured to prevent accidental entanglement.
- Do not operate this tool if you are tired, ill or under the influence of alcohol, drugs or medication.

- The user of the machine shall have received information about the machine's functions and how it should be used. He should also have participated in user level training by a certified ActSafe PME Instructor.
- Wear hearing protection and helmet.
- Never start or run the engine inside a closed room or building. Breathing exhaust fumes can kill.
- Keep handles free from oil and fuel.
- Keep hands away from rope grab during the ascent or when the machine is running.

TOOL SAFETY

- Inspect the entire unit before use. Replace damaged parts. Check for fuel leaks and make sure all fasteners are in place and securely fastened.
- Replace parts that are cracked, chipped or damaged in any way before using the winch.
- Only use components that are CE-marked (or similar) as PPE in fall arrest systems or positioning systems described in this manual. If you feel unsure, contact the manufacturer or agent for advice.

WARNING!

Never modify the ActSafe PME in any way. Do not use the machine for any job except for those which it is intended.

FUEL SAFETY

- Pour fuel outdoors and where there are no risks of sparks or flames.
- Use a container approved for fuel.
- Do not smoke or allow smoking near fuel or while using the ActSafe PME. Clear up all fuel spills before starting the engine.
- Move at least 3 m away from fuelling site before starting engine.
- Stop engine before removing fuel cap.
- Empty the fuel tank before storing the ActSafe. It is recommended that the fuel be emptied after each use. If fuel is left in the tank, store the unit so fuel cannot leak.
- Store the machine and fuel in areas where fuel vapours cannot reach sparks or open flames from water heaters, electric motors or switches, furnaces etc.

WARNING!
Anti-vibration systems do not guarantee that you will not sustain white-finger disease or carpal tunnel syndrome. Therefore, users should monitor closely the condition of their hands and fingers. If any of the above symptoms appear, seek medical advice immediately.

WORK SAFETY

- Make sure that no persons are located within a radius of 5-10 meters under the person or load hanging, depending on the height of the lift and wind conditions.
- Always hold the handle firmly in the right hand with the machine pointing towards the right, so that the exhaust fumes will blow away from the body. Make sure that the rope is firmly anchored, and check that the connection between the ActSafe PME and the harness is reliable.
- Stand directly (in a vertical line) under the anchorage point to prevent a pendulum effect when you are lifted from the ground. In the same way, ensure that any equipment to be lifted is positioned to avoid a pendulum effect.
- Keep all parts of your body away from the muffler and rope grab when engine is running
- Certain parts of the machine can remain hot long after the machine has been turned off. It is therefore important to take care when handling the machine to prevent injury by burning. Make sure that the hot parts do not come into contact with clothes or anything that would be damaged by excessive heat.

MAINTENANCE SAFETY

- Maintain the machine according to recommended procedures.
- Disconnect the spark plug before performing maintenance.

TRANSPORT AND STORAGE

- Carry the ActSafe PME by the handle with the engine off and the muffler away from your body.
- Allow the engine to cool, empty the fuel tank and secure the ActSafe PME before storing or transporting it in a vehicle.
- Empty the fuel tank before storing the machine. It is recommended to empty the fuel after each use.
- Store the ActSafe PME out of reach for children.
- Clean the unit carefully and store it in a dry place.
- Make sure that the engine switch is off during transport or storage.

If situations occur which are not covered in this manual, take care and use good judgement. Contact your dealer or the manufacturer if unsure.

The machine is designed to be part of a system to prevent the risk of fall from heights, and may only be used together with components which are manufactured for this purpose, and which comply with descriptions/requirements according to this manual.

FUEL WARNING!

The machine is equipped with a four-stroke engine. Always run the engine on fuel, pure >95 octan

- Always use a minimum octane number >95.

We recommend the use of a alcylat-petrol 95 octane.
- It gives the machine higher performance.
- Evaporation problems are eliminated.
- It gives a cleaner engine with fewer deposits.
- Aspen+ 4-stroke can be stored for long periods without impairing the quality.
- It does not contain lead, benzene, aromatics or sulphur.

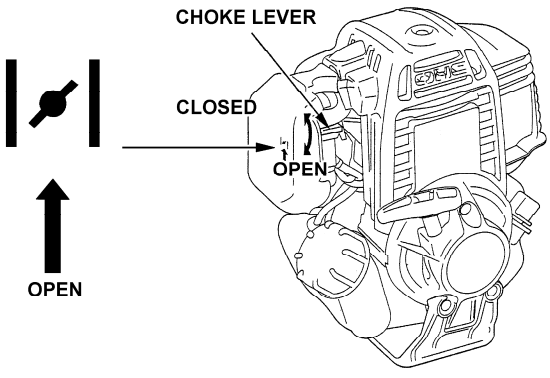
WARNING!

- Always shut off the engine before refuelling.
- Slowly open the fuel cap, when filling up with fuel, so that possible over-pressure disappears.
- Tighten the fuel cap carefully, after refuelling.
- Always move the unit at least 3 m from the fuelling area before starting.

Before filling, clean the tank cap area carefully, to ensure that no dirt falls into the tank.

STARTING
1. Make sure that the fuel cap is securely closed.
2. Set ignition switch (3) to RUN position.
3. Set choke lever to CHOKED position.
4. Pull the starter pull cord handle briskly, keep the handle steady in your grasp; do not let it snap back.
5. Once the engine is running, move the choke to the right. If the engine does not start, repeat the procedure from 2 to 5.

NOTE!
After starting the engine, allow it to warm up about 2-3 minutes to warm up before subjecting it to any load.



STOPPING
Gradually decrease the engine speed to an idle speed, and then slide ignition switch to STOP position.

RUNNING IN
The machine is equipped with overload protection that is based on a centrifugal function. When the engine speed increases, two brake shoes are forced towards a drum; the friction causes the rope grab to be driven. If the machine is run according to the instructions, the overload protection will withstand 300 kg. This level will change if the engine's power diminishes, e.g. if lower quality fuel is used, if the air filter is dirty, or if the weather conditions are bad.

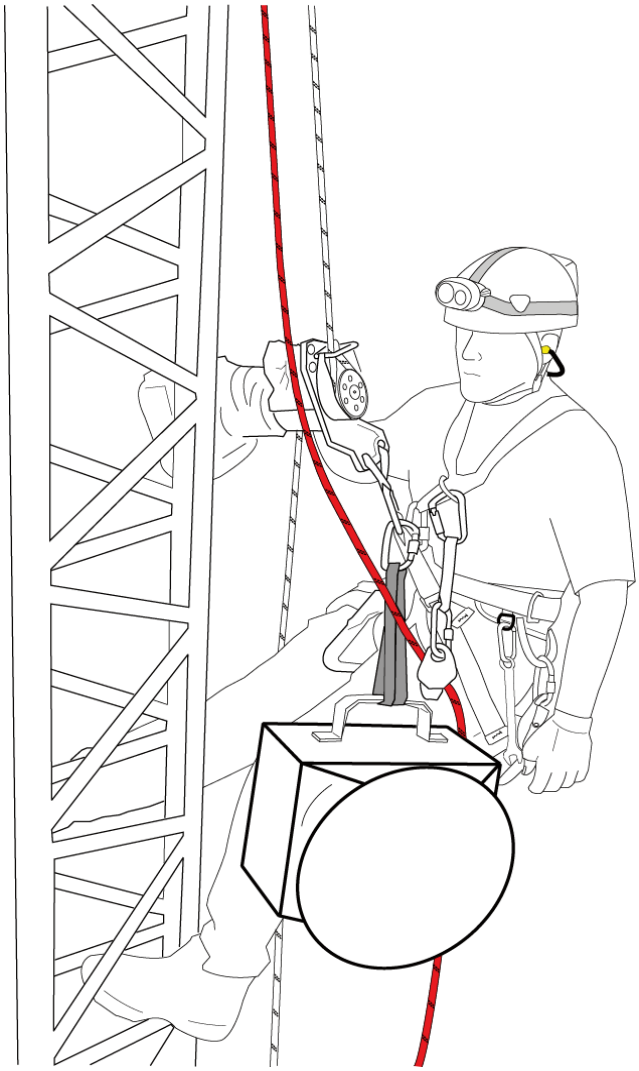
When the ActSafe PME is new, a somewhat lower lift power may be experienced due to the fact that the brake shoes have not yet been run in. If the machine, despite a running in period, still has a low lift capacity, this can be due to worn brake shoes. Contact your nearest ActSafe Service Workshop.

DESCRIPTION OF WORKING METHODS
A new type of technology regarding fall protection working methods and rescue has been introduced in the energy and transport industry under the name Active Fall Protection System, Fall Protection-Working Methods-Rescue. This system requires both modern equipment and good specialised knowledge and skilfulness of an individual user.

SUMMARY
The work method developed by Act Safe Systems AB is based on a technique, which allows the user to work at heights on a taut rope during the entire work process.

All products that are part of rescue equipment and subject to marking (CE-marked for EEC-countries) by laws must be tested and licensed.

This work technology is in many aspects has its origins with the protection technology used during mountain climbing, however, the technology can be modified in order to fully meet the requirements of industry.



The active fall arrest and its work methods have been used in many companies for a long time, e.g. in some parts of the European power supply industry, and to a great extent also on oil drilling platforms etc.

We at Act Safe Systems AB are convinced the benefits that these methods offer to users for improving both working safety and efficiency. Having knowledge of ergonomics gives the user the ability to prevent work accidents.

Our professional trainers and those of our agents have much experience in climbing, rope works and rescue methods and are well qualified to train the staff of your company.

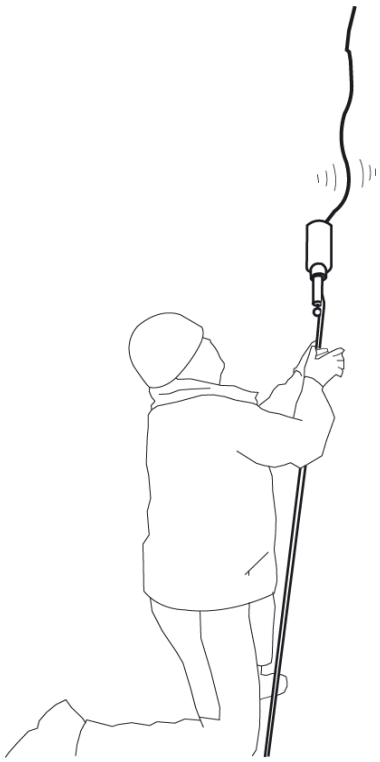
This instruction manual is aimed at helping you to understand the technology and its advantages regarding safety and efficiency, which applies both to normal work equipment and rescue equipment. This instruction does not replace any training and does not contain any detailed description of material and/or limitations to it. Therefore, this instruction only serves as a reference material.

This method is mostly used during work on open framework structures and towers. The user is protected against falling for the whole work period on a structure; the fall arrest equipment secures and makes the ascent and work more effective.

This method guarantees that there is no danger of falling at any point of time during a work process. When using this equipment the technician "drives up" instead of climbing up. Descending is guaranteed by a secure roping process. In total, the time period during which the danger of falling exists up to now is shortened, the method also prevents wear and tear damage and reduces unnecessary climbing Apart from this, rope access is a safe method to easily reach places with difficult of access, e.g. power supply lines as well as guy lines on masts.

Thanks to this method, the user is protected against falling. The method reduces or eliminates unnecessary climbing.

The principle of the technology is following: a long rope is "rocketed" high with a rope throwing device. Then a leading cord is attached to the rope to draw the work rope upwards. The work rope functions as a lifting rope for transport of work material up- and downwards. Additionally, the rope has a function of a signal system between the worker on a mast/column and the one on the ground. Due to strong winds an oral communication is often not possible.



On the mast/pole the sling can be mounted where the safety rope is attached to. This equipment is the only permanent equipment on the mast/column and represents therefore a very cost-effective alternative compared to so-called slide bars or other known solutions that facilitate a safe ascending on a framework structure. This sling must have a suitable braking load and guaranteed for the use with the method of Act Safe Systems AB.

When traversing along a beam the slings and screw karabiners are used as interim security. Apart from the interim security, the equipment contains different quality ropes; sit harness or a full-body-harness, deflection pulleys, karabiner and a descender.

Both harness types can be equipped with a supporting waist belt with D-rings on the side or a so-called work seat which can be used during long works on a rope, as well as with deflection pulleys, karabiner, ActSafe PME, motorised rope winch or a line thrower.

Machine training also covers different knots that can be used in various work situations.

WORK TECHNIQUE

Below is a detailed description of work technology as well as required connections and products that should be used together with the ActSafe PME. However, it should be considered that this instruction does not replace any training that is necessary for using this kind of equipment.

At the first opportunity (or, if you wish, at any use of the equipment) on a support the "Line Thrower" is applied to "rocket high" the guiding lines. The guiding line attachment hole on the work rope is burned in by a soldering iron. The end of guiding line is tied to the end of the working rope as shown.

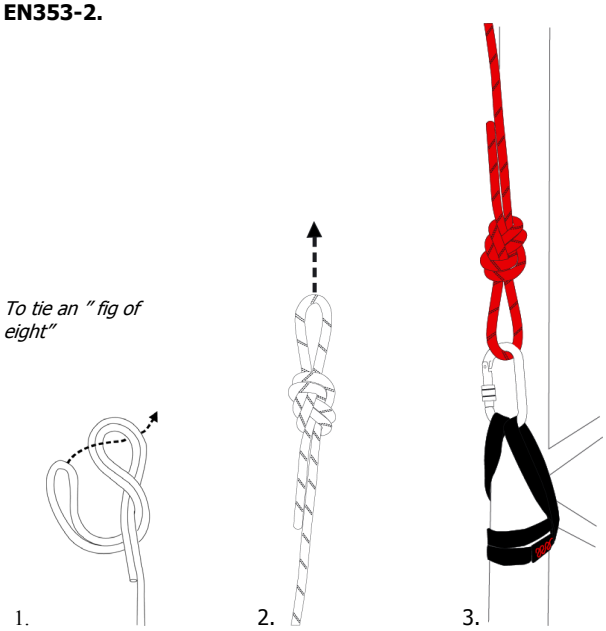
When using the device for first time on a mast the worker has to climb up the mast using a full-body-harness and rescue ropes in accordance with EN363 (Fall Arrest System).

If the mast/pole has a fixed guiding line, the sling has to be mounted so that the guiding line:

a) is hanging down to the ground when wrapped around a wire rope
b) is hanging freely after fixation to prevent it from wear and tear.

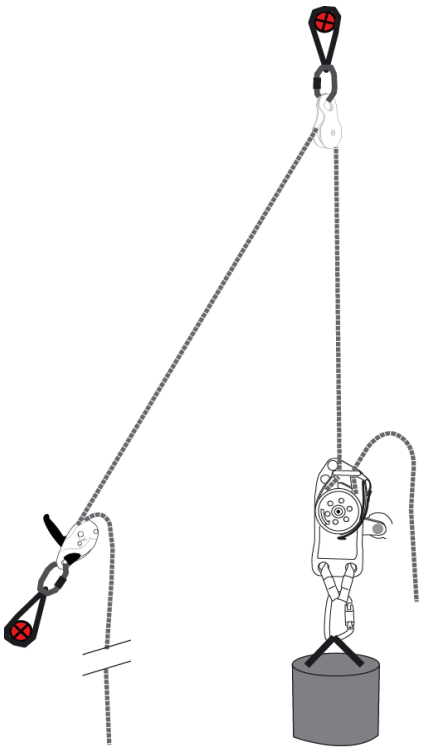
When the guiding lines are positioned the working rope is tied and lifted. The safety rope can be lifted simultaneously.
Tie a " figure of eight" at the end of ropes and connect them by a karabiner and slings. Affix as low as possible to the pole (two separate fixation points). **The safety rope should have the CE-marking according to EN1891 and safety device by EN353-2.**

To tie an " fig of eight"

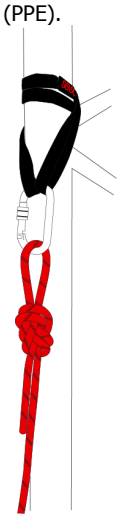


1. 2. 3.

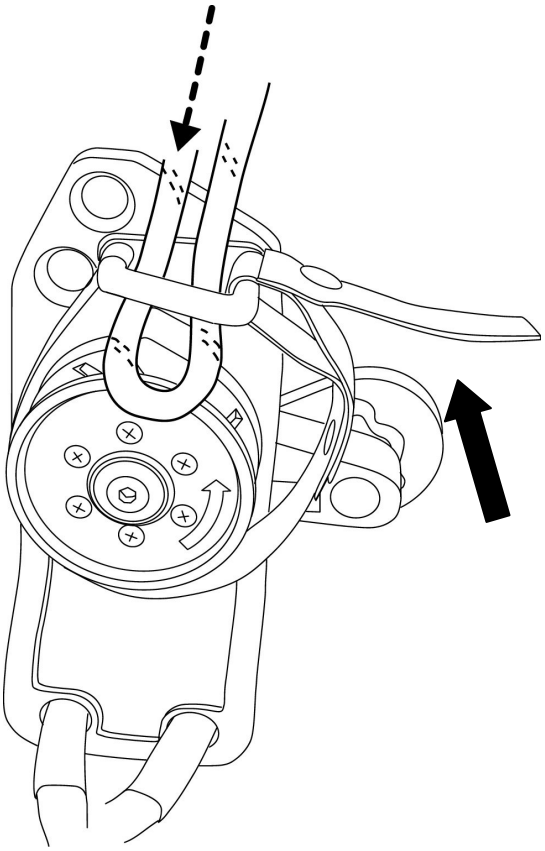
Or this method...



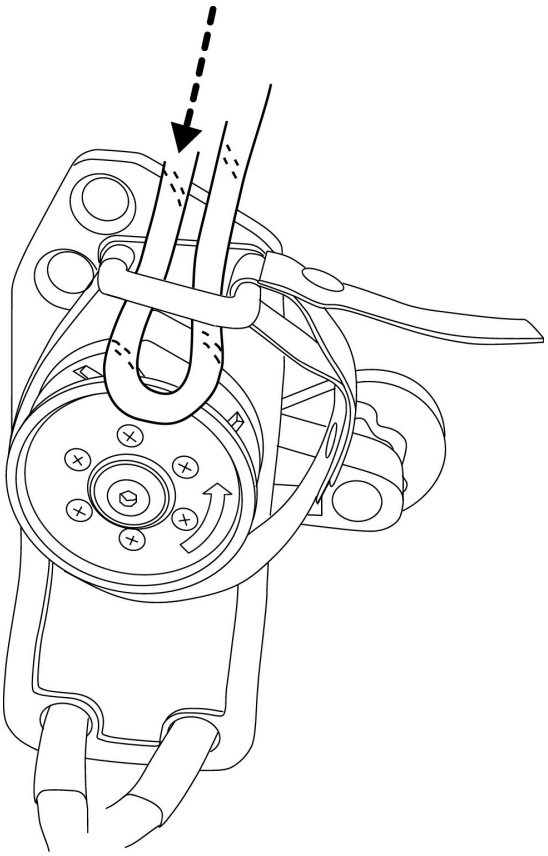
The anchorage point must have a break load of at least 15kN. Karabiner, harnesses, slings etc. must be of approved type and have a CE-marking for personal protective equipment (PPE).



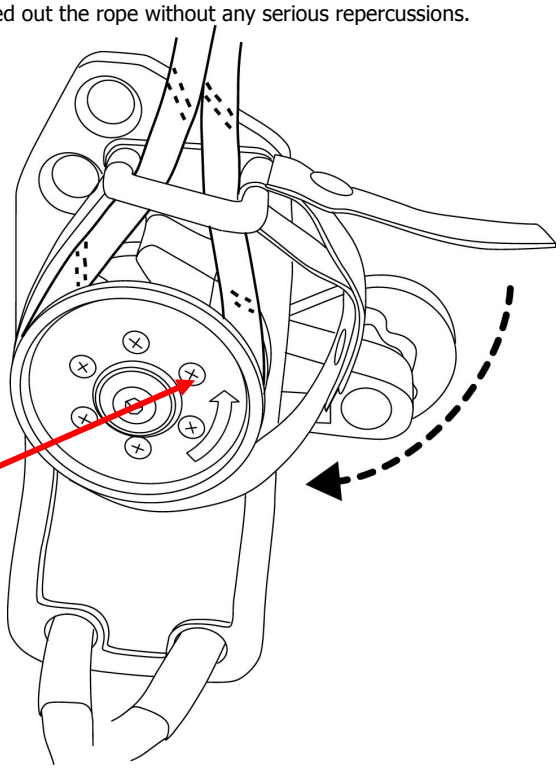
1) Place the machine on the ground directly under the rope that will be used for the ascent, open the rope grab protective cover.



2) Press the rope with your thumb in the ring through the metal loop that is situated directly above the rope grab.



3) Insert the work rope in the rope grab and close the protective cover. Insert the rope so that the rope grab pulls the machine and load upwards. An arrow marks the rope grab's rotation direction. If the rope is inserted incorrectly, the rope grab will feed out the rope without any serious repercussions.



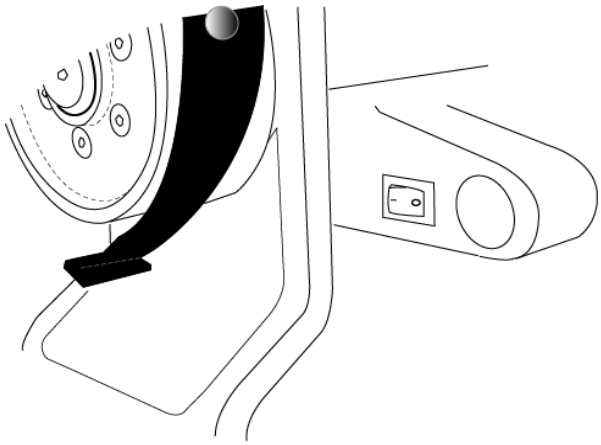
Pull lightly the outgoing tail rope during the first metres of the take off (ascending).

Pay attention that the rope comes out clearly from the space between the guide knife and the loop.

After approx. 5 metres ascending, the weight of the outgoing tail rope will clear by itself.

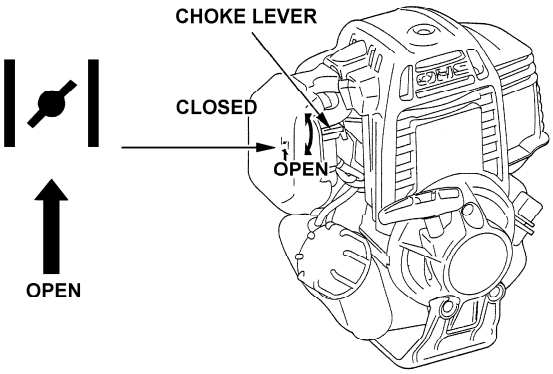
- Start the machine whilst still placed on the ground.

Check the power supply with the ON/OFF switch.



- Use the choke if necessary.

- Start with the pull starting rope.



Normally the choke is only used when cold-starting the machine. Press the choke button down directly after the machine has started.

- Turn gently on the throttle and the ActSafe PME will "climb" up the rope to a level where the karabiner hangs under the machine.
- Clip the karabiner onto the front attachment point of the harness. (The machine and its controls are best manoeuvred if an attachment point at waist height is used, i.e. a so-called sit harness or a full-body harness with similar design).

Checklist before ascending:
- Work rope/safety rope securely anchored.
- Work rope/safety rope secured on the pole.
- Machine is attached correctly.
- Safety rope is connected (weather/regulations).
- Karabiner to harness is locked.
- Descending device, Tibloc, slings and intermediate attachments are present.

It is important that this checklist becomes a part of the routine work. Moreover, the importance of evaluating that the working rope is set up safely and reliably, and that all the components are correctly connected and secured cannot be emphasised enough.

Stand directly under the anchor point of the work rope in order to prevent the risk of a pendulum motion directly after lifting off the ground. Check that the rope is placed in the right direction of the rope grab.

Directions regarding visual inspection will accompany the machine. These should be read carefully before use.

The machine is designed to be pointed right, away from the user during the ascent. It is extremely important, from the aspect of safety, that even left-handed users hold the machine in this way in order to obtain a clear view of the necessary controls, and to ensure that the exhaust fumes are directed away from the body.

Use the recommended type of petrol in order to increase the machine's reliability and reduce unnecessary discharge. Turn off the motor and inspect the machine, if extreme vibration or noise should occur. If different persons use the ActSafe PME, or if there are several units in use at your work, introduce a routine whereby the machine's serial number and work time is logged. The record cards, stating the date of the last annual service, are checked at regular intervals.

Ascend to a position where, if possible, both feet can be placed firmly on a surface. If your work takes longer than 15-20 min you should attach an ergonomic support to your harness (for example a seat/sit board). Connect a descender to the rope below the ActSafe PME, and attach it to the harness, remove the rope from the machine's rope grab (the descender now forms the attachment point).

ALTERNATIVES
As mentioned above, the line thrower may be used to bring a permanent working rope for initial ascent to its position. However, the device may also be used during other assignments, preferably under weather conditions where it often comes to icing of ropes, which may cause damages and breakage of a permanently fixed guiding line. In certain assignments, e.g. during inspection of connections, in case of a repeating burst of the connections the line can be attached close to the connection.

The line thrower can be replaced by other devices, of course. You can find these products in the catalogue of Act Safes System AB.

We strongly recommend the use at all times of a secondary safety line back up system.

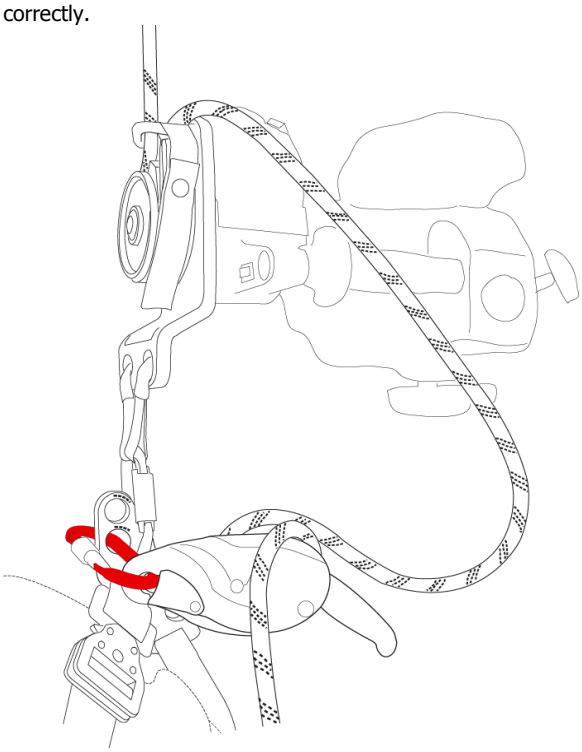
In many countries including UK and companies (where the internal safety regulations take priority over the national regulations) an additional safety rope with a so-called accompanying safety back up device is recommended which follows the user when he/she moves, and protects him/her in case of falling down. It is important to highlight that the installation of this additional back up system must enable the user to reach the safety device. We have learned from our experience that this safety system (which is available in various designs from different suppliers) may not always function with full efficiency, especially in case of bad weather conditions or when the rope the safety device is attached to has a low own weight. Problems may occur during descent when the length of the rope under the user is not sufficient.

The work method is based on a technology that allows working during the whole assignment at height with a tensioned rope. The user can choose between a full-body or sit harness. Should he/she decide for a full-body harness it must be equipped with a fixation point on the front side at the waist height and constructed so that the load of this fixing point is divided between back and leg bands, i.e. a traditional sit harness fixation.

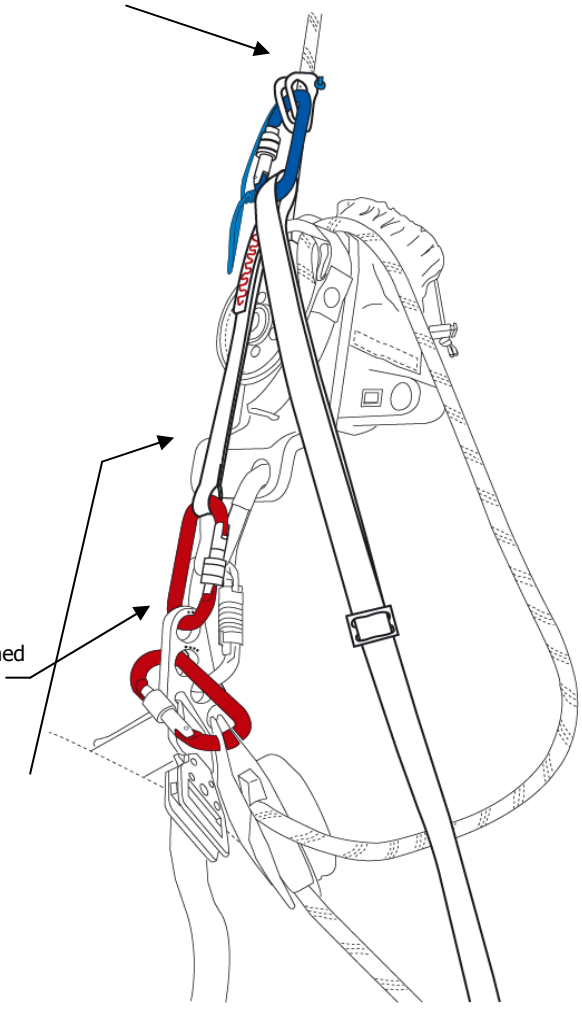
TECHNIQUE IN CASE OF ENGINE FAILURE
In case of engine failure, there is a bag on the *ActSafe PME* that enables the worker to simply connect a descending device, disengage the machine, and then descend to the ground.

In the rescue kit on top of the ActSafe PME there are two slings, two karabiners and a small rope clamp (TIBLOC) that constitutes all the equipment necessary to disengage the ActSafe PME whilst hanging in the air. A descending device must, however, be included to the ActSafe PME rescue equipment, and we suggest I'D by Petzl. This is the descending device we have recommended in this method description.

In case of engine failure:
1) Attach the I'D to the rope under the machine and connect it to the harness with a red karabiner. Have sufficient rope (approx. 1 - 2 m) between the ActSafe PME and the I'D so you can work easily. Ensure that the I'D have been threaded correctly.



2. Take out the equipment, secure the TIBLOC (blue karabiner) approx. 10 cm above the ActSafe PME´s rope grab.

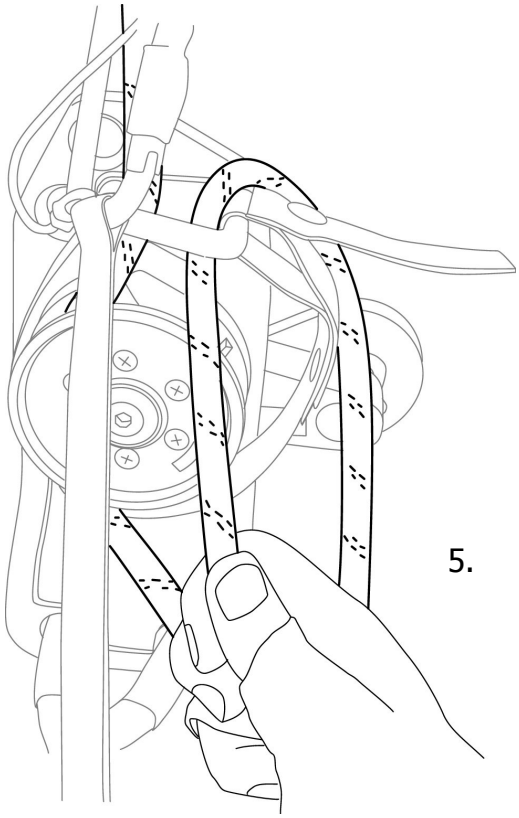


3. Connect the other red karabiner that is attached to the shorter sling to the harness.

4. Push the TIBLOC up, to tighten the sling.

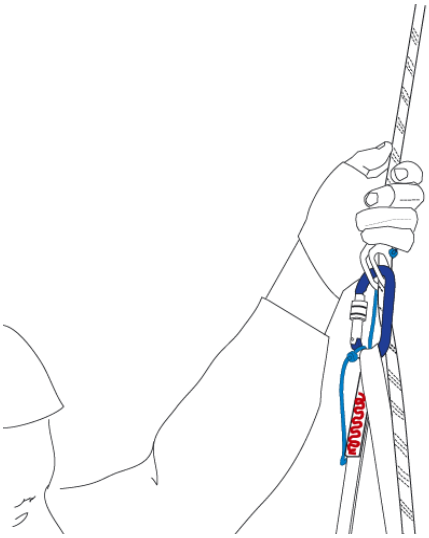
NOTE! The karabiners are colour coded.

5. Release the rope from the machine's rope grab (the safety device is now formed by the TIBLOC which is attached to the harness by the short sling). The ActSafe PME is now loose and you can hang down, still connected to your harness.



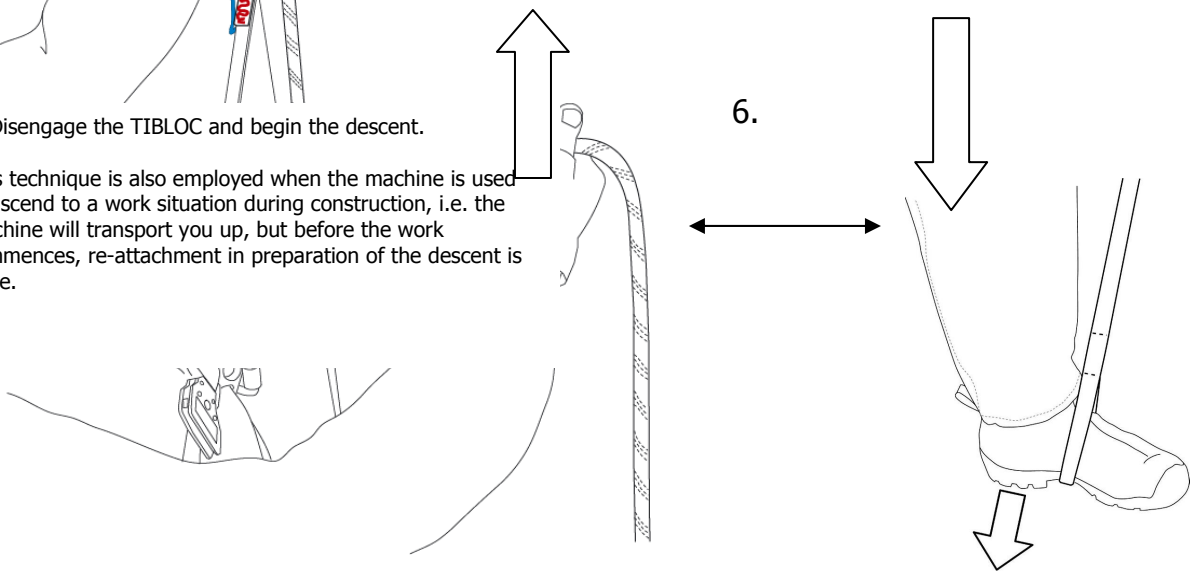
5.

6. Place one foot in the longer sling and "step up". While you are standing up tighten the rope through the I'D. Your weight is now taken by the I'D and the TIBLOC is unburdened.



7. Disengage the TIBLOC and begin the descent.

This technique is also employed when the machine is used to ascend to a work situation during construction, i.e. the machine will transport you up, but before the work commences, re-attachment in preparation of the descent is done.



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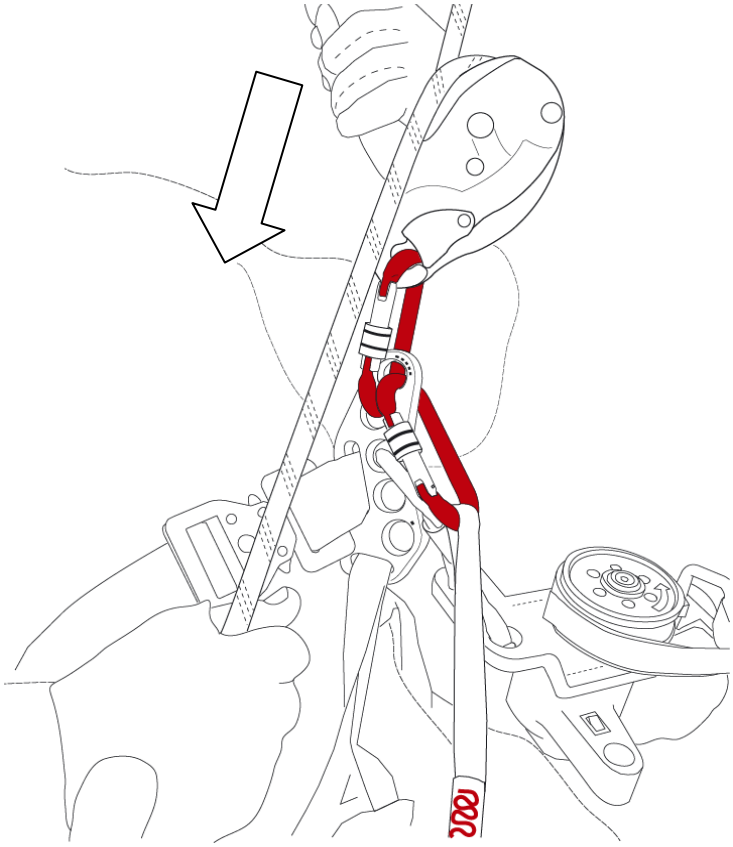
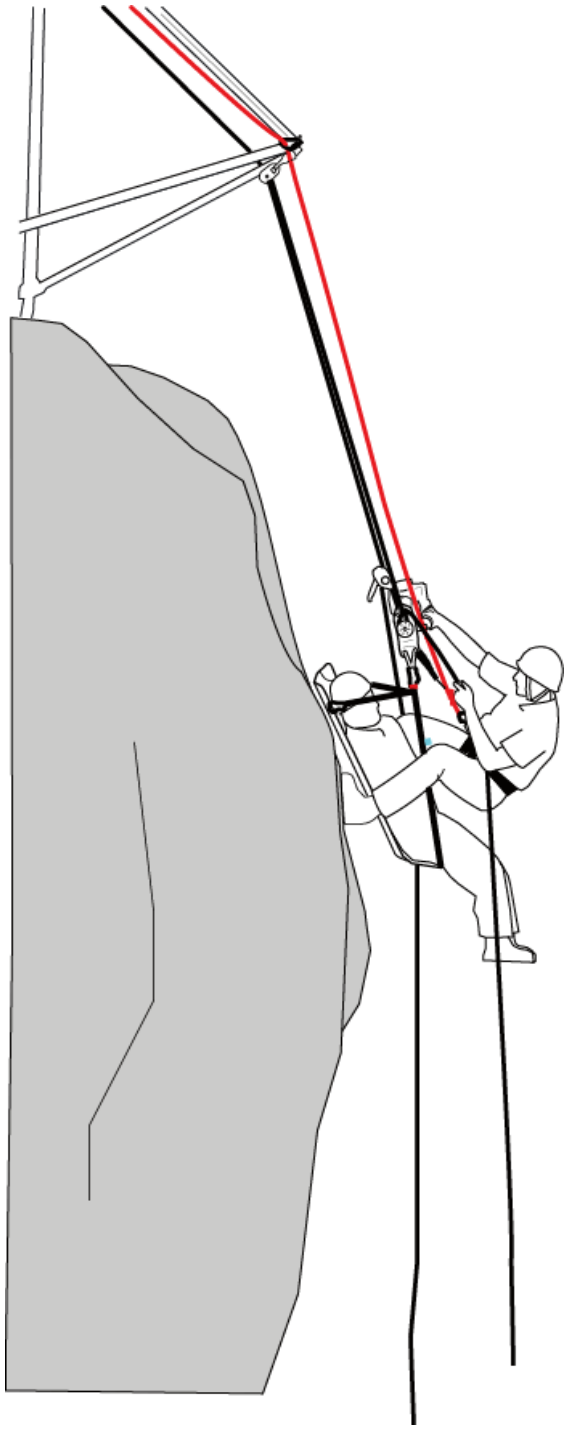


ACTSAFE PME IN RESCUE OPERATIONS

The ActSafe PME also functions as a source of power for lifts during rescue operations. Its greatest advantage compared to other products is, in addition to its simplicity and lightweight, that the rescuer who assists the stretcher controls the machine. A common problem in rescue operations is the communication breakdown. Communication problems can occur between the person who steers the stretcher past obstacles and the person who handles the winch, particularly in narrow spaces. Both training exercises and actual rescue operations have shown that this can have disastrous results especially if the "winch operator" does not perceive a command to stop. The stretcher can get stuck, and considerable pressure can be placed on the rope, the karabiners, on the casualty, or the rescue worker who assists the stretcher.



When the ActSafe PME is used with heavy loads (up to 600 kg), and in rescue operations, it is necessary to split the forces onto several ropes. This is possible by building a pulley system, in which the pressure is distributed on several points. Attach a rope to the top hole of the machine's body by tying a loop (figure of eight) and connecting the rope to the top hole with a karabiner. You can also connect an I'D (Petzl) to the top hole for descending possibilities. The attachment on the top should if possible be attached to two separate anchor points, but most important is that the anchor point must withstand a shock load of 15 kN.

Rescue operations with ActSafe PME demand trained rescue personnel. The rescuer has to be trained according to ActSafe PME-RESCUE.

The machine should not be used in areas where there is a risk of explosion, or where ventilation is inadequate. The stretcher that is used should be approved for lifts, and all other components approved as PPE (Personal Protective Equipment)

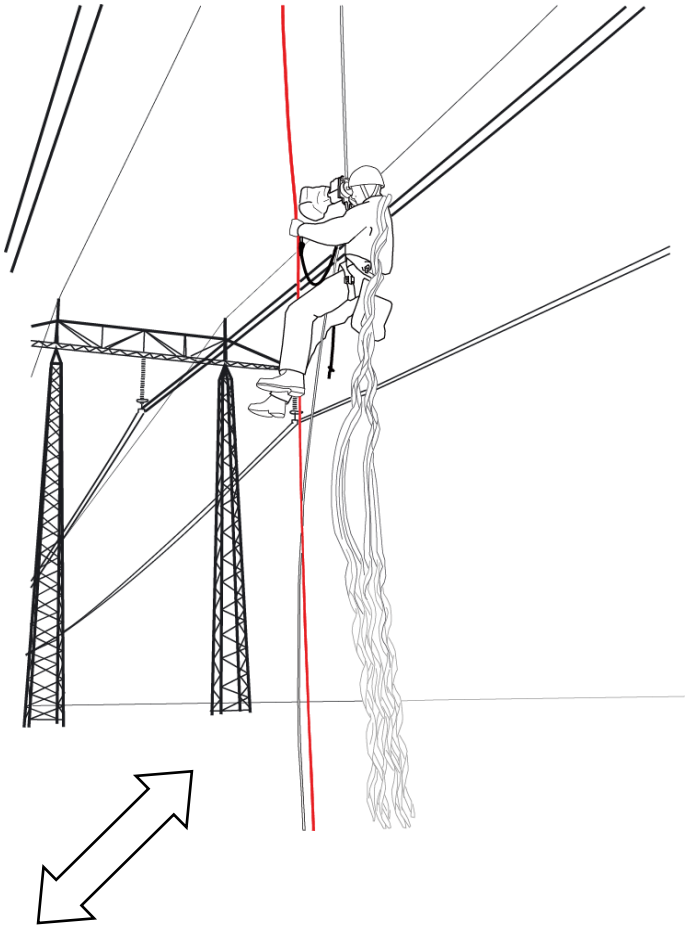
RESCUE OF COLLEAGUES FROM FRAMEWORK STRUCTURES

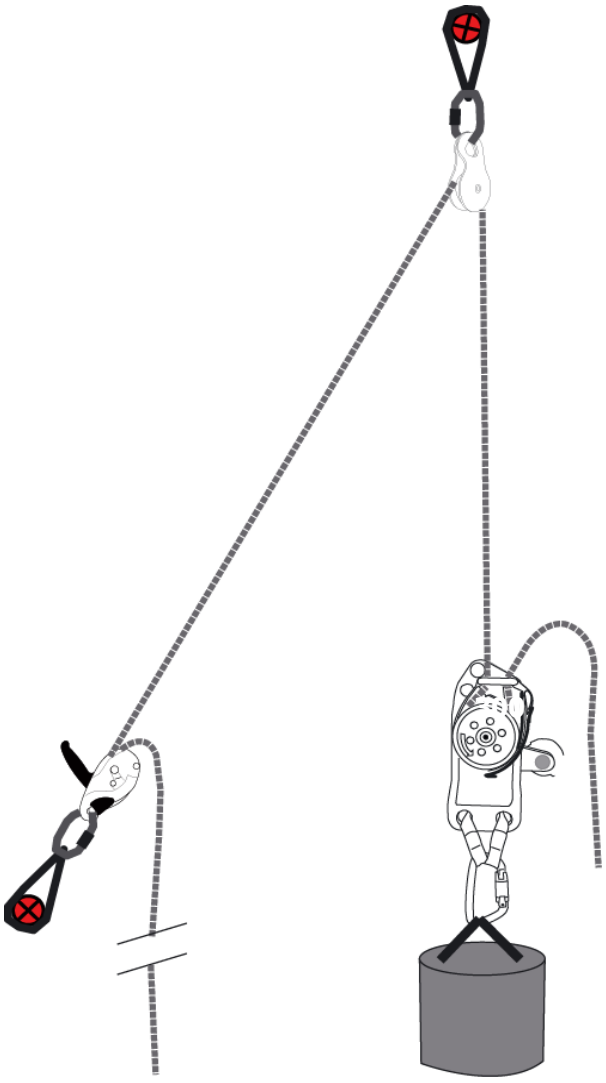
Where ActSafe PME is used in working situations on framework structures, a method has been developed where the work rope, which is used to ascend and descend to the place of work, is anchored at ground level. The work rope is anchored on the ground using a sling, a karabiner and a descending device.

Should an incident occur, the person on ground level should be able to perform the rescue operation by lowering the worker, **on condition that the injured person is not connected to a lanyard and is not unconscious.** (In some work situations, the use of a lanyard can simplify "work positioning", and during the course the participants will learn a method that will apply in these situations).

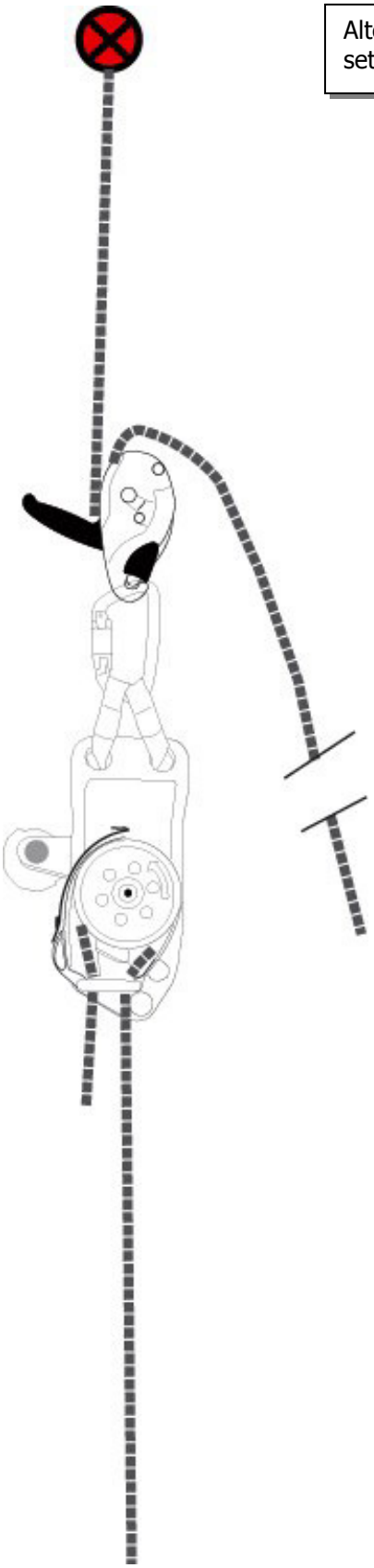
The procedure below can be used in most cases, i.e. if the person in distress is only connected to the work rope, or is still contactable after an injury and can disengage his lanyard,

- Lower the injured person by using the I'D (the rope length shall be at least twice the height of the rescue).
- By using this rigging-method the rescue system is built into the work rope system.





Alternatives to different set up



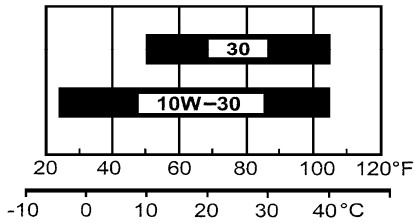
SERVICE AND DAILY INSPECTIONS

The machine has to be maintained and serviced according to below instruction in order to ensure its reliable functioning. ActSafe PME must be sent to a competent workshop at least once a year. Contact Act Safe Systems AB for information about your nearest workshop

CARBURETTOR SETTINGS

Always use lead-free fuel with a minimum of 95 octanes.

- The **T-screw** should be adjusted to keep the rope grab from turning during engine idle. The engine will have to be adjusted for changes in temperature and altitude.



Ambient Temperature
SAE 10W-30 is recommended for general use. Other viscosities shown in the chart may be used when the average temperature in your area is within the indicated range.

AIR FILTER
The air filter must be cleaned from dust and dirt in order to avoid:
- carburettor malfunctions
- starting problems
- engine power reduction
- unnecessary wear on the engine parts.
- abnormal fuel consumption

Clean the air filter daily or more often if working in exceptionally dusty areas.

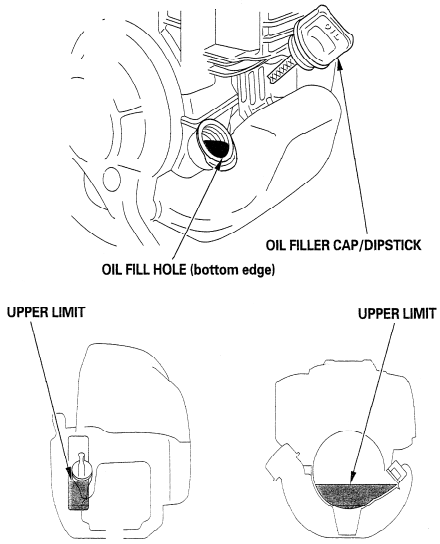
Cleaning the air filter:
Remove the air filter cover and the filter. Rinse it in warm soapsuds. Check that the filter is dry before re-assemblage.

An air filter that has been used for some time cannot be cleaned completely. Therefore, it must regularly be replaced. A damaged filter must always be replaced.

TROUBLESHOOTING
Engine does not start
- Check the fuel (correct amount - or water in the fuel?).
- Is the ignition cable attached to the spark plug?
- Is the setting of the adjustment lever ok?

Engine smokes
- Check the fuel tank gap for air openings

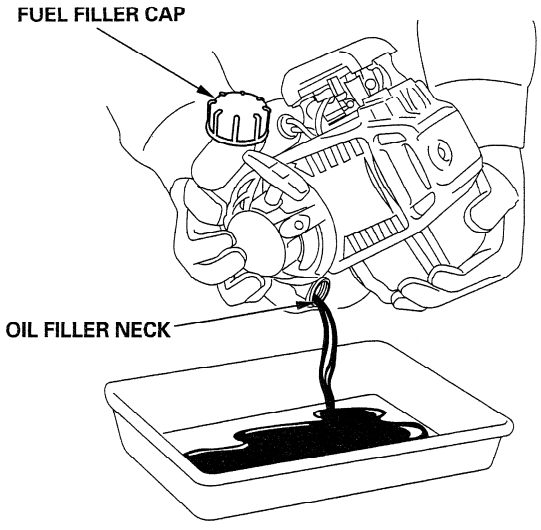
Engine runs for a short time and stops then
- Fuel level check.
- Check the fuel tank gap for air openings.



Oil Level check

Check the engine oil level before each use, or every 10 hours if operated continuously.

Check the engine oil level with the engine stopped and in a level position.



Oil Change
Drain the used oil when the engine is warm. Warm oil drains quickly and completely.

1. Check that the fuel filler cap is tightened securely.

2. Place a suitable container below the engine to catch the used oil.

3. Remove the oil filter cap/dipstick and drain the oil into the container by tipping the engine toward the oil filter neck.

SPARK PLUG

The spark plug condition is influenced by:
- A dirty air filter.
- Hard running conditions (such as cold weather).

These factors cause deposits on the spark plug electrodes, which may result in malfunction and/or starting difficulties. If the engine is low on power, difficult to start, or runs poorly at idling speed, always check the spark plug first.

If the spark plug is dirty, clean it and check the electrode gap. The spark plug should be replaced after about 100 operation hours or earlier if the electrodes are badly corroded.

In some areas, local legislation requires using a resistor spark plug to suppress ignition signals. If the engine was originally equipped with a resistor spark plug for replacement, you have to choose the same type of spark plug whenever you replace it.

MUFFLER

Detach the muffler and remove any excess carbon from the exhaust port or muffler inlet from time to time in order to avoid power-loss.

MAINTENANCE SCHEDULE

Below, you will find some general maintenance instructions. For further information please contact your service dealer.

Daily maintenance:
- Clean the exterior of the unit.

Weekly maintenance:

- Check the starter, especially cord and return spring.

- Clean the exterior of the spark plug.

- Check that the sling does not show any traces of cuts or damage. The sling will become teaselled during normal use, which is quite acceptable.

- Check that the metal parts, which come into contact with the work ropes, slings and harness, are not damaged in any way that can cause cuts on the textiles.

- Check that the "kit" in the small black bag is complete.

- Remove the spark plug and check the electrode gap.

- Clean the cooling fins on the cylinder and check that the air intake at the starter is not clogged. Clean the air filter.

Monthly maintenance:

- Rinse the fuel tank with petrol and run the engine until it stops.
- Clean the exterior of the carburettor and the space around it.
- Clean the fan and the space around it.

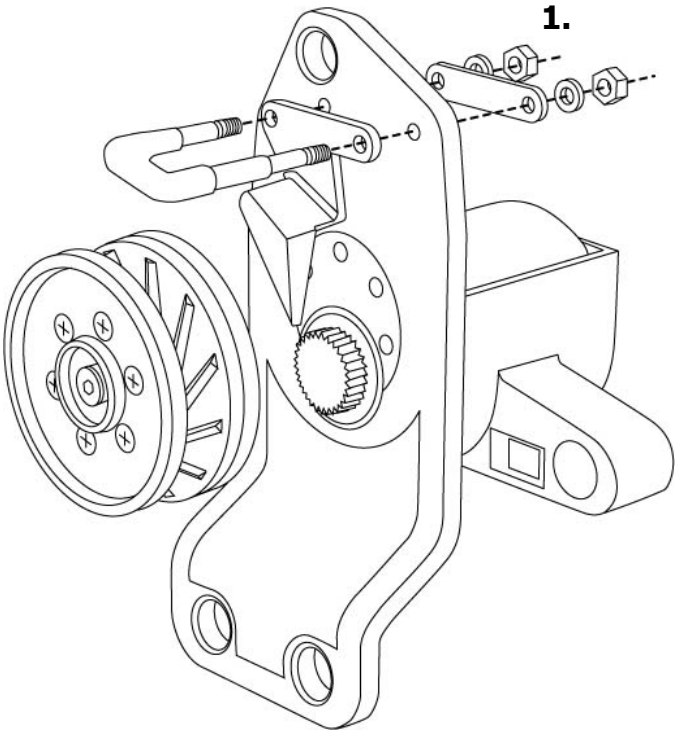
Yearly maintenance:

- *ActSafe PME* must be sent to a competent workshop once a year. Contact Act Safe Systems AB for information about your nearest workshop.

THE ROPE GRAB

It is normally not necessary to remove the rope grab for inspection unless it has been exposed to abnormally dusty or dirty environment.

However, in case it should be necessary to clean the machine and its rope grab, please observe the following instructions:



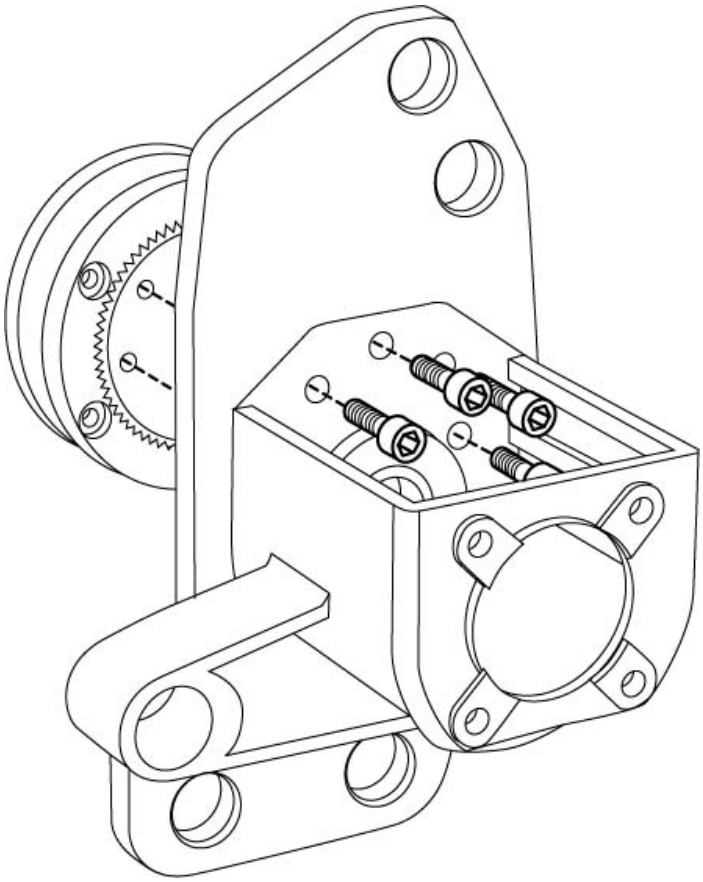
The rope grab can be demounted and replaced only together with the drive shaft. The rope grab and the drive shaft form a unit.

Loosen the two M6 nuts (1.) that are situated inside the textile bag. Remove them and the Nord-lock washers. The loop, and the guard which is mounted on the loop, can now be removed.

The "guide knife" which is also connected to the loop is thereby removed.

After cleaning, re-lubricate the gear ring and gear wheel with water-proof grease (similar to gear grease).

Replace the guide knife and the loop and fasten the two M6 nuts at 11 Nm. Make sure that the Nord-lock washers are mounted in the same way as before. These are special washers with high resistance against vibration.



ENGINE WARRANTY

Act Safe Systems AB is pleased to assume warranty obligations and apologies for the trouble caused to you. All authorised dealers are also entitled carry out warranty repairs. In most cases it only concerns routine repairs, however, sometimes warranty claims are not justified. For instance, warranty is deemed void if engine defects are caused by misuse, incorrect maintenance, transport, handling, storage or installation. Apart from that, warranty is considered void if the engine's serial number has been removed or the engine has been modified.
If the customer does not accept a decision of an authorised dealer an investigation shall be carried out to determine whether the warranty services should be provided. Please ask your dealer to submit all necessary information to his wholesale dealer or the factory. If the wholesale dealer or the factory decides that the claim is justified all defect parts will be fully replaced under the warranty. In order to avoid misunderstandings between customers and dealers some causes for engine defects are presented below which are not covered by warranty.

Insufficient maintenance:
Service life of an engine depends on conditions where the engine is used in as well as on its maintenance. Some machines are often used in dust or dirt, which causes symptoms that are similar to premature wear. Such wear and tear caused by penetration of dirt, dust, spark plug cleaning agents or other scrubbing materials into engine due to insufficient maintenance shall not be covered by warranty.

This warranty shall cover material and/or workmanship defects of the engine. Additionally, warranty conditions shall not be applied to repairs that are caused by following reasons:

- Parts that are not original Act Safe Systems AB parts.
- Loose carburettor, blocked fuel lines, blocking valves or other defects caused by use of contaminated or old fuel. (Use clean, fresh unleaded petrol).
- Defects or wear of parts through dirt, insufficient air filer maintenance, incorrect remounting. See „Instruction of use".
- Routine settings of the engine.

Warranty services shall be carried out by Act Safe Systems AB contractual dealers only.

REGISTER AND YOUR COMPANY CAN EXTEND ITS WARRANTY PERIOD FOR ONE MORE YEAR.

Register by writing a mail with subject "Registration of ActSafe PME" to info@actsafe.se or call +46 31 655 660.

ActSafe wants to have direct contact with the users of our products. When your company registers, the warranty period will extend with one more year. As a registered user your company will receive current information about important changes/improvements and newsletters with the possibility to share your experience with many other users of the ActSafe PME Ascender.

Warranty terms for ActSafe PME

The ActSafe PME has a warranty period for one year. All contracted retailers are authorized to perform warranty repairs. In most cases it is routine repairs; however, sometimes the warranty requirements are not entitled.

For example, warranty is not valid if an engine is damaged by incorrect maintenance, usage, transportation, management, storage or installation. Apart from this the warranty is not valid of the serial number of the engine has been removed or the engine has been modified. The warranty is not valid if the ActSafe PME has damages caused by accident, carelessness or if the ascender has been used outside its purposed range. ActSafe can not be held responsible for direct or indirect consequences caused by the use of this ActSafe product.

If the customer will not accept the warranty decision from the authorized distributor an inquiry must be performed. This to ensure that guarantee service is to be approved. Kindly ask your distributor to provide you with all necessary information from his supplier or manufacturer. If the distributor or manufacturer says that the claim is entitled, all defect parts will be exchanged during the warranty. To avoid misunderstandings between customer and distributor, see below listed causes of engine defects that are not covered by the warranty.

Insufficient maintenance

The life of an engine depends on the conditions where the engine is being used as well as its maintenance. Some machines are often used in dusty and muddy environments which gives the impression that the devise has been worn out prematurely.

Wear caused by dust, dirt, and cleaning fluids for spark plugs or other scrubbing chemicals that is pressed into the engine due to insufficient maintenance, will not be covered by warranty.

This warranty covers material- and or production malfunction of the engine. Furthermore, the warranty conditions will not be applied on repairs that have to be done due to the following causes:

- Parts that are not original ActSafe parts
- Loose carburettor, blocked fuel lines-, valves or other defects that are caused by the use of contaminated or old fuel.
- Defects or wear of parts through dirt, insufficient air filter maintenance, incorrect remounting. Please read the "Instruction of use".
- Routine settings of the engine.

Warranty services shall be carried out by ActSafe contracted dealers only.

actsafe-ascenders.com

Guarantee

General conditions

ActSafe is responsible for the proper function of the product during the guarantee time period. If a defect is detected while under guarantee the product will be repaired without cost by ActSafe or a authorized Service Dealer.

The validity of the guarantee must be proved by a copy of the invoice and the serial no of the product. ActSafe will not repair the product under guarantee if this information is incomplete or has been subject to changes after the date of purchase.

Time period of guarantee

The time of guarantee is 12 months after the date of purchase and must be proved by the documentation mentioned above.

Repair under guarantee

Repair under guarantee will be done by ActSafe or an authorized service dealer. Please contact ActSafe for your nearest service dealer. The cost of transportation of the product to and from the Authorized Service dealer is the responsibility of the Customer.

Limitation of responsibility

ActSafe can not be held responsible for

- Periodic inspection, maintenance and repair or replacement of parts as a result of normal use.
- Materials of consumption
- Defects due to modifications that have been made without the consent of ActSafe.
- Costs due to the necessity of adapting or modifying the product as a result of new national or international standards.

Repair under guarantee will not be made if damage has arisen due to:

- Improper use or abusive handling of the product.
- Repairs, modifications and cleaning done by service personnel not authorized by ActSafe.
- The use of spares and other parts which are not compatible with the product.
- Insufficient packing of the product when sending it to ActSafe or an authorized service dealer.
- Accident, natural catastrophe or circumstances beyond the control of ActSafe.

Extended the guarantee period

Extend the warranty to two years.

Register yourself as a user of the ActSafes Power Ascenders. As a return we will extend the warranty to two years. As a registered user you will receive important information regarding, safety, working methods, updates etc.

Contact ActSafe and register today at www.actsafe-ascenders.com or send en email to info@actsafe.se

Don’t forget to give us the serial number of your Power Ascender.

WARNING!

The ActSafe PME should only be used so that the rope has an anchor point straight above the position of the user. The anchor point has to withstand a force of at least 15kN.

Before use, make a visual inspection of all the components of the system to ensure that it is in a serviceable condition and operates correctly. All components in the system should be PPE approved for use in a fall arrest- or work positioning system (CE-marked or similar).

This item/product could be used in areas of potential dangerous areas, for example heights or depths. The owner and user of this product are responsible for his/her actions and the ActSafe PME demands certified users only. Always take instruction and an approved training course before use.

Declaration of conformity

ActSafe Systems AB
Säterigatan 29
SE-417 64 Gothenburg
Sweden

We hereby declare that the power ascender type ActSafe PME for the lifting and lowering of loads and persons meets the fundamental requirements of the below stated directives:

Swedish Professional Association AFS 1994:48

EU Machinery Directive (MD) 2006/42/EC
Chapter 4 (lifting) and chapter 6 (lifting of persons)

We further declare that the power ascender type ActSafe PME is identical with the equipment which is referred to in the standard control certificate no. 04015 issued by Hauptverband der gewerblichen Berufsgenossenschaften, 0547

Gothenburg 2009-12-18

Act Safe Systems AB

Magnus Glans
Managing Director

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VAT:SE556035-133901

Europäisch notifizierte Stelle / Kenn-Nummer 0515
European notified body / Identification number 0515
Organisme notifié européen/ Numéro d'oidentification 015

Deutsche Gesetzliche Unfallversicherung

Fachausschüsse Bau (BAU) und Tiefbau (TB)
Prüf- und Zertifizierungsstelle im BG-PRÜFZERT

Bescheinigung
No. of certificate/N° d'attestation:
Nr. **BAU/TB 09157-EG**
vom/from/de: **02.07.2009**

EG-Baumusterprüfbescheinigung
EC Type test Certificate
Attestation CE de type

Bescheinigungsinhaber: (Auftraggeber) Certificate holder: Titulare de l'attestation	**Act Safe Systems AB** Säterigatan 29 S-41764 Göteborg
Hersteller: Manufacturer: Fabricant:	Act Safe Systems AB Säterigatan 29 S-41764 Göteborg
Produktbezeichnung: Product designation: Désignation du produit:	**Spezialgerät (Aufstiegshilfe)**
Typ: Type: Type:	Odyssé-PME
Prüfgrundlage: Testing based on: Bases d'essai:	GS-Bau-08 (08.2000)
Bestimmungsgemäße Verwendung: Intended purpose: Utilisation conformément à la destination:	Aufstiegshilfe im Zuge der Schaffung von höhen- und ortsveränderlichen Arbeitsplätzen
Bemerkungen: Remarks: Remarques:	Ersetzt Prüfbescheinigung 04015

Das geprüfte Baumuster entspricht den einschlägigen Bestimmungen der Richtlinie 2006/42/EG (**Maschinen**).
The type tested complies with the provisions laid down in the directive 2006/42/EC (**Machinery**).
Le modèle testé satisfait aux dispositions respectives de la Directive 2006/42/CE (**Machines**).
Diese Bescheinigung **gilt ab 29.12.2009** und wird spätestens ungültig am: **01.07.2014**
The certificate will become **invalid on 29.12.2009** and expire no later than:
La présente attestation est **valable à partir du 29.12.2009** et expire au plus tard le:
Weiteres über die Gültigkeit, eine Gültigkeitsverlängerung und andere Bedingungen regelt die Prüf- und Zertifizierungsordnung vom September 2008.
Further provisions concerning the validity, the extension of the validity and other conditions are laid down in the Rules of Procedure for Tetsing and Certification of September 2008.
Plus de détails concernant la validité, la prolongation de la validité et d'autres conditions sont précisés dans le réglement relatif aux procédures d'essai et de certification daté Septembre 2008.

Prüf- und Zertifizierungsstelle • DGUV • Fachausschüsse BAU/TB •

Unterschrift:
Signature:
Signature: .....
Dipl.-Ing. Univ. R. Hartdegen

Fachausschüsse Bau (BAU) und Tiefbau (TB) • Prüf- und Zertifizierungsstelle im BG-PRÜFZERT • Landsberger Str. 309 • 80687 München
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SERVICE CARD

ActSafe Serial No:	
Year of manufacture	
Date of purchase	
Date first put into service	
Name of owner	

Date of service:

DATE	INSPECTOR	OK

Specifications for ActSafe PME

The ActSafe PME is the basic product in a working method developed by Act Safe Systems. The method, together with the machine and product knowledge, demands trained personnel.

Immediately before use, the user shall:

- make a visual inspection of the ActSafe PME and all the components in the working system like ropes, karabiners and descending device etc to ensure that it is in a serviceable condition and will operate correctly.
- ensure that the recommendations for use with other components within a system, are complied with as advised on the record card for the system or component.

Obsolescence
The winch part has a limited life span in use of five (5) years. It will be worn and may be damaged in normal use. Factors such as high impact load, mud or grit, drop from any height, all wet conditions, and contact with heat, acids, alkalids and other corrosives will reduce its safe working life.

If any of these are present, discretion should be used and if in doubt, the winch should be withdrawn from service. After the five years period, an inspection of an authorized person could extend the lifetime year by year.

Engine:	Honda GX35
Type:	Forced air-cooled, 4-stroke OHC, single cylinder
Displacement:	35,8 cc
Output:	1,6 HP
Ignition:	Transistorized magneto
Spark:	CMR5H (NGK)
Carburettor:	Diaphragm type
Clutch:	Centrifugal clutch
Gross Weight:	10,4 kg
Reduction ratio:	43:1
Fuel tank:	0,65 lit.
Recommended fuel:	>95 octane unleaded gasoline
Recommended engine oil:	SAE 10W-30
Rope grab:	Component parts of stainless steel (chromated) and aluminium. 4212 anodized, equipped with a "back stop"
Lubrication:	Grease Interflon LS ½
Speed of ascent:	17 m/min. with 100 kg load
Safe Working Load:	200 kg (SWL)
Rescue:	250 kg
Max load:	300 kg
Standard approval:	
Certificates:	The machine and the rope grab according to 2006/42/EG CE-marked Karabiners according to EN12275 and EN362. CE-marked loops according to 89/686/EEC. CE-marked rope clamp according to EN567 (incl. The Emergency Kit).
Recommended rope:	Kernmantel rope/static/ Ø 10-12mm (11 mm is recommended), standard approved according to EN1891 and also approved for use by Act Safe Systems AB.
Other elements that could influence the lifting capacity	- Fuel - Fuel (use of wrong octane) - Rope diameter - Altitude - The condition of the engine (dirty air filter, spark plug...) - The condition of the centrifugal clutch. - The winch is operating **best** between -10°C - +30°C. You can of course use it in other temperatures as well.

If you have trouble with the engine, please contact your Act Safe-dealer.

CE

GS geprüfte Sicherheit